

Status of the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

1. (original) A method, comprising:

(a) forming a filter through coupling a first resistor having a first resistance value and a capacitor having a first capacitance value;

(b) setting a corner frequency of the filter using the first resistance value and the first capacitance value; and

(c) forming a tuning device through coupling a second resistor having a second resistance value, a switched-capacitor having a third resistance value, and a comparator having an amplifier and a signal converter; and

(d) comparing voltage signals using the comparator to produce a control signal that adjusts the first and second resistance values as a function of the third resistance value.

2. (original) The method of claim 1, further comprising:

receiving a first one of the voltage signals from the switched-capacitor;

receiving a second one of the voltage signals from a reference source; and

adjusting the corner frequency of the filter through varying at least one of the first and second voltage signals.

3. (original) The method of claim 1, further comprising:

using a clock to control the switched-capacitor, such that varying frequency of the clock adjusts the corner frequency.

4. (original) The method of claim 1, further comprising:
receiving a first one of the voltage signals from the switched-capacitor;
receiving a second one of the voltage signals from a reference source;
using a frequency of a clock to control the switched-capacitor; and
changing at least one of the first and second voltage signals or changing
the frequency of the clock to adjust the corner frequency of the filter.
5. (original) The method of claim 1, wherein step (a) further comprises
coupling an amplifier to the resistor and the capacitor.
6. (original) The method of claim 5, wherein step (a) further comprises
configuring the amplifier as an inverting integrator.
7. (original) The method of claim 5, wherein step (a) further comprises using
an operational amplifier as the amplifier.
8. (original) The method of claim 1, wherein step (d) further comprises using
the control signal to substantially simultaneously adjust the first and second resistance
values.
9. (original) The method of claim 8, wherein step (d) further comprises
adjusting the first and second resistance values, such that the first and second resistance
values are substantially equal.
10. (original) The method of claim 1, wherein step (c) further comprises using
an operational amplifier as the amplifier.

11. (original) The method of claim 1, further comprising:
 - coupling together a first plurality of selectable resistors to form the first resistor;
 - coupling together a second plurality of selectable resistors to form the second resistor;
 - using a digital value as the control signal; and
 - adjusting the first and second resistance values by selecting at least one particular resistor in each of the first and second plurality of selectable resistors.
12. (original) The method of claim 1, wherein step (c) further comprises:
 - providing an amplifier in the tuning device;
 - coupling a non-inverting input of the amplifier in the tuning device to ground;
 - coupling an output of the amplifier in the tuning device to the comparator;
 - coupling the switched-capacitor between a first one of the voltage signals and the inverting input of the amplifier in the tuning device; and
 - coupling the second resistor between the inverting input and the output of the amplifier in the tuning device.
13. (original) The method of claim 12, wherein step (c) further comprises using an operational amplifier as the amplifier in the tuning device.